

## 12HRL600



The Narada High Rate range of VRLA batteries and provide reliable battery backup to any High Rate UPS application.

All Narada High Rate series batteries use optimized plate technology and a patented post design offering exceptional service life.



### Technical Features:

- ◆ Flame Retardant ABS Cover and Container, UL94 V-0, LOI>28%
- ◆ Patented copper alloy terminal design
- ◆ Epoxy TPS design for High Reliability post seal
- ◆ 6 months of storage at 77°F (25°C) with a capacity > 80%
- ◆ Initial capacity at 100%
- ◆ Low pressure one-way flame arresting valve(s) UL1989
- ◆ Absorbent Glass Mat (AGM) Sealed Technology, Recombination efficiency of 99.9%

### Compliance and Safety:

- ◆ **ISO 9001:2000 and ISO 14001:2004 certified production facilities**
- ◆ UL Recognized Component 924, for use in or with listed UL1778, UL1989 and UL924 systems
- ◆ IEC60896-21/22
- ◆ BS6290 part 4 / Eurobatt guide
- ◆ **TL9001 / ISO9001(TUV) Quality System**
- ◆ Battery installation compliant with: EN 50272-2
- ◆ All batteries meet or exceed IEEE recommended practices

### Transportation:

- ◆ Classified as Nonspillable UN 2800 and meet the Nonspillable criteria listed in DOT-CFR Title 49, 171-189 (d) (3) (i) and (ii) and exempt from CFR 49, Subchapter C requirements
- ◆ Meets transportation conditions of IMDG exemption 238, IATA/ICAO Special Provision A67 (Not Restricted)

wpc @ 15 min 1.67 vpc / 77°F (25°C)	600 watts
wpc @ 5 min 1.60 vpc / 77°F (25°C)	979 watts
Ah @ 20hr 1.75 vpc / 77°F (25°C)	153 Ah

Nominal Voltage	12V
Float Charge Voltage @25°C (2.23 – 2.27vpc)	13.4 – 13.6
Max. Charge Current (A) (5 hour rate @ 1.75vpc)	37.5 Amps

Electrolyte Absorbed H <sub>2</sub> SO <sub>4</sub>	1.300
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Short Circuit Current (A)	4000 Amps
Internal Resistance (mΩ)	3.29mΩ

Terminal Type	Torque
M6-M (Front L Bracket)	78 in-lbs (8 ±1 Nm)
M6-F (Top Insert)	78 in-lbs (8 ±1 Nm)

Dimension	in	mm
Length	21.65	550
Length Base	20.87	530
Width	4.90	125
Overall Height	11.23	285

	Lbs.	Kg
Weight	113	51



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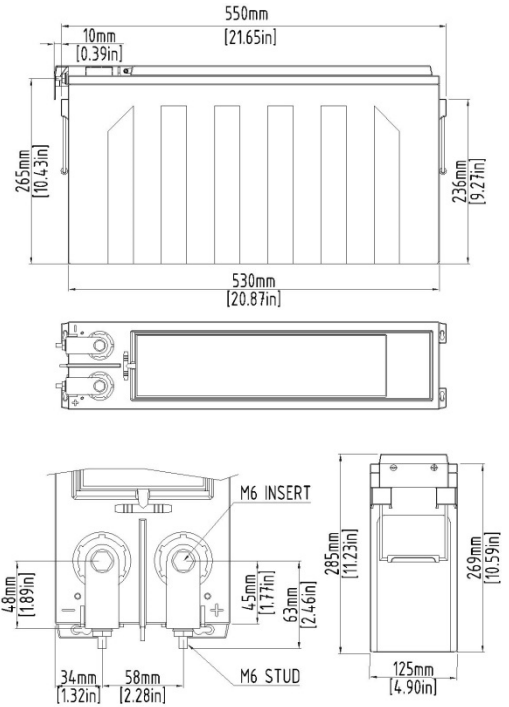
### Operating Parameters

Float Charging Voltage	13.5V / 2.25Vpc @ 77°F (25°C)
Equalize /Cycle	14.0V – 14.3V 2.33Vpc to 2.38Vpc @ 77°F (25°C)
See Operations and Maintenance Manual for specific guidelines and recharge times	

Charging Temperature Compensation	-2 mV/cell/°F > 77°F (-3.6 mV/cell/°C > 25°C)
	+2 mV/cell/°F < 77°F (+3.6 mV/cell/°C < 25°C)

Maximum AC Ripple (Charger)	0.5% RMS, 1.5% peak-to-peak for float charge voltage for best results
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Operating Temperature Range	
Nominal	+74°F (24°C) to 80°F (27°C)
Charge	-20°F (-28°C) to +122°F (50°C)
Discharge	-40°F (-40°C) to +140°F (60°C)
Storage Temperature Range	-4°F (-20°C) to +104°F (40°C)



### Constant Power Discharge Watts per cell (25°C, 77°F)

End Cell Voltage	5min	10min	15min	20min	30min	40min	50min	1h	2h
1.60V	979.3	772.6	621.4	515.5	388.3	292.7	250.0	218.0	122.8
1.67V	920.0	736.0	600.0	503.0	384.3	292.1	249.0	217.0	122.0
1.70V	879.7	711.5	586.2	495.4	382.6	291.0	248.0	216.0	121.0
1.75V	797.7	667.7	562.2	482.1	378.9	290.0	246.0	215.0	120.0
1.80V	718.7	624.2	535.4	464.2	369.3	286.6	245.5	214.5	119.2
1.83V	675.1	592.2	510.8	444.7	355.6	277.0	237.9	208.2	116.5
1.85V	643.0	565.0	488.4	426.0	41.9	267.2	230.2	202.0	114.5

### Constant Current Discharge Amperes (25°C, 77°F)

End Cell Voltage	5min	15min	30min	1h	2h	4h	8h	10h	20h
1.60V	627	345	208	113	63.3	34.8	18.9	15.5	8.14
1.67V	563	335	206	112	63.0	34.6	18.8	15.4	8.09
1.70V	531	329	204	112	62.7	34.3	18.7	15.3	8.03
1.75V	476	313	199	110	62.2	34.1	18.6	15.2	7.98
1.80V	424	291	189	106	60.9	33.7	18.3	15.0	7.88
1.83V	393	271	179	103	59.8	33.5	18.0	14.7	7.72
1.85V	365	250	169	100	59.6	33.4	17.6	14.2	7.46

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High Rate HRL-Series